8 Overview of Current Non-ARB Research Efforts

8.2 Data Analysis for a Better Understanding of the Weekday/Weekend O_3 and PM Differences - Atmospheric and Environmental Research, Inc. for the Coordinating Research Council

8.2.1 Summary of workplan

Objectives:

At 3 urban locations outside CA, study the day-of-the-week dependence of:

diurnal profile of hourly O_3 concentrations

daily maximum 1-hour and 8-hour O_3

PM10 and PM2.5

Test hypotheses for the "weekend effect"

Identify changes in the weekday/weekend difference over a longer period

Hypothesis Testing:

1. Changes in emissions of NO_X and VOC

   Hourly NO_X, VOC, VOC/NO_X from SLAMS/NAMS

   Photochemical indicators from PAMS and special field studies
2. Increased carryover due to Friday and Saturday night traffic

   Hourly CO, NO_x from SLAMS/NAMS
3. Changes in traffic patterns: temporal

   Hourly CO, NO_x, VOC, and NO_x/VOC

   Composition of VOC mixture from PAMS
4. Changes in traffic patterns: spatial

   CO, NO_x, and VOC at several metropolitan monitors

   Maps to display patterns
5. Sources other than on-road mobile sources

   Speciated VOC and PM data from PAMS and IMPROVE

   Marker species

6. Changes in PM emissions affect light extinction and photochemistry

   Solar/UV radiation and PM from NAMS/SLAMS, PAMS, and IMPROVE

   Visibility from NOAA data base

8.2.2 **Final report** (completed June 2001 under Coordinating Research Council, Contract No. A-36B) available at:
http://www.arb.ca.gov/aqd/weekendeffect/weekendeffect.htm